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CofC

Attorney Docket No.: SON-2217

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.:

6,747,811 B2

Patented:

June 8, 2004

ATTN: CORRECTIONS BRANCH

Inventor:

Koichiro KISHIMA, et al.

FOR: OPTICAL SYSTEM, METHOD OF PRODUCING OPTICAL SYSTEM, AND OPTICAL

**PICKUP** 

## REQUEST FOR SECOND CERTIFICATE OF CORRECTION

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Certificate FEB 2 4 2005

Sir:

of Correction

It is respectfully requested that a Certificate of Correction be issued in connection with the above-identified patent. It appears that a mistake was recorded through the fault of the Patent and Trademark Office in the printing of the patent as clearly disclosed by the records of the Office within the meaning of 35 USC § 254. Specifically, the Patent Office appears to have made in error in the printing of claim 6 of the above-identified patent. The error noted in the attached Certificate of Correction was not in the application as filed by Applicant, as evidenced by the Amendment filed by the Applicant on November 3, 2003 (a copy of which is attached). Thus, it is believed that the errors were made on the part of the Office such that no government fee is required.

Accordingly, two copies of the special Certificate of Correction form PTO-1050 are attached hereto. It is believed that the errors noted are errors of consequence, and thus warrants the granting of a Certificate of Correction. Although it is believed no fee is due in connection

Attorney Docket No.: SON-2217

with this request, should any costs be incurred, please consider this an authorization to charge Deposit Account No. 18-0013.

Respectfully submitted,

Dated: February 7, 2005

Ronald P. Kananen Reg. No. 24,104

RADER, FISHMAN & GRAUER PLLC 1233 20<sup>th</sup> Street, N.W., Suite 501 Washington, D.C. 20036

Telephone: (202) 955-3750

Facsimile: (202) 955-3751

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO.:

6,747,811 B2

DATED:

June 8, 2004

INVENTOR (S):

Koichiro KISHIMA

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### Column 17

Line 52, "tens" should read -- lens --.

MAILING ADDRESS OF SENDER:

Customer No. 23353 **Rader, Fishman & Grauer PLLC** 1233 20<sup>th</sup> Street, NW Suite 501 Washington, DC 20036

Patent No. 6,747,811 B2

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO.:

6,747,811 B2

DATED:

June 8, 2004

INVENTOR (S):

Koichiro KISHIMA

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

#### Column 17

Line 52, "tens" should read -- lens --.

MAILING ADDRESS OF SENDER:

Customer No. 23353
Rader, Fishman & Grauer PLLC
1233 20<sup>th</sup> Street, NW
Suite 501
Washington, DC 20036

Patent No. 6,747,811 B2



Atty Docket No.: SON-2217

Inventor: KOICHIRO KISHIMA ET AL

tion No.: 09/940,938 Filing Date: August 29, 2001
OPTICAL SYSTEM, METHOD OF PRODUCING OPTICAL SYSTEM, AND Application No.:

Title:

OPTICAL PICKUP

**Documents Filed: Amendment Transmittal** 

Amendment

Via: Due Date: 11/15/03

Sender's Initials: RPK/sjm Date: November 3, 2003





### PATENT APPLICATION

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re ti	he U.S. Patent Application of	)	
KOIC	HIRO ĶISHIMA ET AL.	)	
Serial No. 09/940,938		)	Group Art Unit: 2873
Filed:	August 29, 2001	)	Examiner: JORDAN SCHWARTZ
For:	OPTICAL SYSTEM, METHOD OF PRODUCING OPTICAL SYSTEM, AND OPTICAL PICKUP	) ) )	

# AMENDMENT AND RESPONSE TO SECOND OFFICE ACTION

Commissioner for Patents
P.O. Box 1450
U.S. Patent & Trademark Office
Alexandria, VA 22313-1450

Sir:

In response to the second nonfinal Office Action dated August 7, 2003 (Paper No.

9), please amend the above-referenced application as follows:

## **CLAIM AMENDMENTS**

Please amend claims 1, 5, 6, 7, 10 and 11 as follows (all of the pending claims are reproduced below in their entirety for the Examiner's convenience):

1. (Currently Amended) An optical system comprising first and second optical lenses arranged so as to have coinciding or substantially coinciding optical axes, wherein: said first optical lens has a substrate comprised of an optical material;

said substrate has a convex portion serving as a convex lens and an outer circumference portion positioned around said convex portion;

a thickness of said substrate at said outer circumference portion is greater than a thickness of said substrate at said convex portion;

said second optical lens has a first convex portion on one surface, and a second convex portion on another surface opposing said one surface; and

the outer circumference portion of said first optical lens and an outer circumference portion of said second optical lens are fixed in place relative to each other so that said convex portion of said first optical lens faces said second optical lens.

(Original) An optical system as set forth in claim 1, wherein:
 the outer circumference portion of said first optical lens faces the outer
 circumference portion of said second optical lens; and

a facing surface of said outer circumference portion of said first optical lens and a

facing surface of said outer circumference portion of said second optical lens are flat or approximately flat.

- 3. (Previously Amended) An optical system as set forth in claim 2, wherein:

  a facing surface of said outer circumference portion of said first optical lens is

  vertical or substantially vertical with respect to the optical axis of said first optical lens;

  a facing surface of said outer circumference portion of said second optical lens is

  vertical or substantially vertical with respect to an optical axis of said second optical lens; and

  the facing surface of said outer circumference portion of said first optical lens and

  the facing surface of said outer circumference portion of said second optical lens are bonded

  together.
- 4. (Previously Amended) An optical system as set forth in claim 1, wherein: said first optical lens further comprises a flat portion positioned around said convex portion;

said outer circumference portion is positioned around said flat portion; and
a thickness of said substrate at said outer circumference portion is greater than a
thickness of said substrate at said flat portion.

5. (Currently Amended) An optical system as set forth in claim 1, wherein the outer circumference portion of said first optical lens and the outer circumference portion of said second

optical lens are bonded together with an adhesive to opposite ends of a ring-shaped via an intermediate member so that said convex portion of said first optical lens faces said second optical lens.

6. (Currently Amended) An optical system as set forth in claim 1, wherein:
said second optical lens has a first convex portion on one surface, a second

eonvex portion on another surface opposing said one surface, and an outer circumference portion
of said second optical lens is positioned around said first and second convex portions, and center
axes of said first and second convex portions coincide eoinciding or substantially coincide
eoinciding; and

the outer circumference portion of said second optical lens and the outer circumference portion of said first optical lens are fixed in place relative to each other.

7. (Currently Amended) A method of producing an optical system having first and second optical lenses, wherein:

said first optical lens has a substrate comprised of an optical material; and said substrate has a convex portion serving as a convex lens and an outer circumference portion positioned around said convex portion, a thickness of said substrate at the outer circumference portion being greater than a thickness of said substrate at said convex portion; and

said second optical lens has a first convex portion on one surface, and a second

## convex portion on another surface opposing said one surface;

comprising the step of bonding together with an adhesive said outer circumference portion of said first optical lens and an outer circumference portion of said second optical lens so that optical axes of said first and second optical lenses coincide or substantially coincide.

- 8. (Original) A method of producing an optical system as set forth in claim 7,
  further including the step of mounting the outer circumference portion of said
  second optical lens on said outer circumference portion of said first optical lens and positioning
  said first and second optical lenses so that said optical axes coincide or substantially coincide;
- a mounting surface of said outer circumference portion of said first optical lens being flat or approximately flat; and
- a bottom surface of said outer circumference portion of said second optical lens being flat or approximately flat.
- 9. (Previously Amended) A method of producing an optical system as set forth in claim 8, wherein:

the mounting surface of said outer circumference portion of said first optical lens is vertical or substantially vertical with respect to the optical axis of said first optical lens; and the bottom surface of said outer circumference portion of said second optical lens is vertical or substantially vertical with respect to an optical axis of said second optical lens.

10. (Currently Amended) A method of producing an optical system having first and second optical lenses, wherein:

said first optical lens has a substrate comprised of an optical material; and said substrate has a convex portion serving as a convex lens and an outer circumference portion positioned around said convex portion, a thickness of said substrate at the outer circumference portion being greater than a thickness of said substrate at said convex portion;

comprising the step of bonding together said outer circumference portion of said first optical lens and an outer circumference portion of said second optical lens so that optical axes of said first and second optical lenses coincide or substantially coincide, wherein:

said first optical lens further comprises a flat portion positioned around said convex portion;

said outer circumference portion of said first optical lens is positioned around said flat portion; and

a thickness of said substrate at said outer circumference portion of said first optical lens is greater than a thickness of said substrate at said flat portion; and

said second optical lens has a first convex portion on one surface, and a second convex portion on another surface opposing said one surface.

11. (Currently Amended) A method of producing an optical system having first and second optical lenses, wherein:

said first optical lens has a substrate comprised of an optical material; and said substrate has a convex portion serving as a convex lens and an outer circumference portion positioned around said convex portion, a thickness of said substrate at the outer circumference portion being greater than a thickness of said substrate at said convex portion;

comprising the step of bonding together said outer circumference portion of said first optical lens and an outer circumference portion of said second optical lens so that optical axes of said first and second optical lenses coincide or substantially coincide,

wherein said outer circumference portion of said first optical lens and said outer circumference portion of said second optical lens are bonded with an adhesive to opposite ends of a ring-shaped via an intermediate member so that the optical axes of said first and second optical lenses coincide or substantially coincide.

12. (Previously Amended) A method of producing an optical system having first and second optical lenses, wherein:

said first optical lens has a substrate comprised of an optical material; and said substrate has a convex portion serving as a convex lens and an outer circumference portion positioned around said convex portion, a thickness of said substrate at the outer circumference portion being greater than a thickness of said substrate at said convex portion;

comprising the step of bonding together said outer circumference portion of said

first optical lens and an outer circumference portion of said second optical lens so that optical axes of said first and second optical lenses coincide or substantially coincide

wherein said second optical lens has a first convex portion on one surface, a second convex portion on another surface opposing said one surface, and said outer circumference portion positioned around said first and second convex portions, and center axes of said first and second convex portions coinciding or substantially coinciding.

13. (Previously Amended) An optical pickup, comprising:

a laser;

an optical system for focusing laser light from said laser on an optical disk; and a photodetector for receiving said laser light reflected at said optical disk; wherein:

said optical system comprises first and second optical lenses arranged so that their optical axes coincide or substantially coincide;

said second optical lens passes the laser light from said laser and supplies it to said first optical lens;

said first optical lens has a substrate comprised of an optical material;
said substrate has a convex portion for focusing laser light from second optical
lens on said optical disk and an outer circumference portion positioned around said convex
portion;

a thickness of said substrate at said outer circumference portion is greater than a

thickness of said substrate at said convex portion; and

the outer circumference portion of said first optical lens and an outer circumference portion of said second optical lens are fixed in place relative to each other so that said convex portion of said first optical lens faces said second optical lens.

14. (Original) An optical pickup as set forth in claim 13, wherein:
said outer circumference portion of said first optical lens faces the outer
circumference portion of said second optical lens; and

a facing surface of said outer circumference portion of said first optical lens and a facing surface of said outer circumference portion of said second optical lens are flat or approximately flat.

- 15. (Previously Amended) An optical pickup as set forth in claim 14, wherein:
- a facing surface of said outer circumference portion of said first optical lens is vertical or substantially vertical with respect to the optical axis of said first optical lens;
- a facing surface of said outer circumference portion of said second optical lens is vertical or substantially vertical with respect to an optical axis of said second optical lens; and

the facing surface of said outer circumference portion of said first optical lens and the facing surface of said outer circumference portion of said second optical lens are bonded together.

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16. (Original) An optical pickup as set forth in claim 13, wherein:
said first optical lens further comprises a flat portion positioned around said
convex portion;

said outer circumference portion is positioned around said flat portion; and
a thickness of said substrate at said outer circumference portion is greater than a
thickness of said substrate at said flat portion.

- 17. (Previously Amended) An optical pickup as set forth in claim 13, wherein the outer circumference portion of said first optical lens and the outer circumference portion of said second optical lens are bonded via an intermediate member so that said convex portion of said first optical lens faces said second optical lens.
- 18. (Previously Amended) An optical pickup as set forth in claim 13, wherein:
  said second optical lens has a first convex portion on one surface, a second
  convex portion on another surface opposing said one surface and an outer circumference portion
  positioned around said first and second convex portions, and center axes of said first and second
  convex portions coinciding or substantially coinciding, and

the outer circumference portion of said second optical lens and the an outer circumference portion of said first optical lens are bonded together.

#### **REMARKS**

This is in full and timely response to the second, nonfinal Office Action dated August 7, 2003. Reconsideration and reexamination are respectfully requested in view of the foregoing amendment and the following remarks.

By the foregoing amendment, claims 1, 5, 6, 7, 10 and 11 have been amended.

Claims 13 to 18 have been allowed, and claims 6 and 12 were indicated by the Examiner as being allowable if rewritten into independent form. Claims 1 to 18 remain pending in this application.

## Rejection of Claims 1 to 4 and 10 Based On Yamada et al.

Claims 1 to 4 and 10 stand rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Yamada et al. (U.S. Patent No. 4,662,717). The Examiner contends that Fig. 8 of Yamada et al. discloses all of the limitations of the Applicants' invention recited in these claims. To the extent that this rejection might still be applied to the claims as amended, it is respectfully traversed for the following reasons.

Yamada et al. discloses a lens and a lens holding device for securing a lens to a lens barrel. The Fig. 8 embodiment of Yamada et al. includes first and second lenses 20a and 10, respectively, which are secured together by fitting protrusions 23 into depressions 13. However, Yamada et al. does not disclose a second lens having a first convex portion on one surface and a second convex portion on another surface opposing the one surface. Instead, the second lens 10 in Fig. 8 of Yamada et al. has a first convex portion 10a and a second concave portion 10b on the

Docket No. SON-2217 Serial No. 09/940,938

surface opposing the first convex portion 10a. To emphasize this distinction, independent claims 1 and 10 have been amended by reciting the following additional limitation:

said second optical lens has a first convex portion on one surface, and a second convex portion on another surface opposing said one surface.

Support for this additional limitation is found, for example, in original claims 6 and 12, and on page 18 of the specification. As noted by the Examiner in his statement of reasons for the indication of allowable subject matter on page 5 of the Office Action, Yamada et al. does not disclose the claimed feature of the second optical lens having the claimed two convex surfaces.

Claims 2 to 4 depend from claim 1 and are believed to be allowable for at least the same reasons explained above regarding claim 1.

Accordingly, reconsideration and withdrawal of the rejection of claims 1 to 4 and 10 under 35 U.S.C. 102(b) based on Yamada et al. are respectfully requested.

## Rejection of Claims 5, 7 to 9 and 11 Based On Yamada et al.

Claims 5, 7 to 9 and 11 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Yamada et al. The Examiner contends that Fig. 8 of Yamada et al. discloses all of the features of the Applicants' invention recited in claims 5, 7 to 9 and 11, except the surfaces being bonded together "with an adhesive." The Examiner relies on Judicial Notice of the equivalence of joint fittings and adhesive to satisfy this limitation of the Applicants' claimed

Docket No. SON-2217 Serial No. 09/940,938

invention. To the extent that this rejection might still be applied to these claims as amended, it is respectfully traversed for the following reasons.

Yamada et al. does not disclose the claimed intermediate member bonded between the first and second optical lenses. The Examiner construed the claimed intermediate member as the adhesive that would be used between the first and second optical lenses in the Examiner's proposed modification of Yamada et al. (i.e., when an adhesive is substituted for the disclosed joint fittings of Yamada et al.). However, it is respectfully submitted that this is not a reasonable interpretation of Yamada et al. because an adhesive used to bond two members together cannot be construed as an intermediate member between the members. In any event, claims 5 and 11 have been amended to further distinguish over the Examiner's interpretation of Yamada et al.

Specifically, claims 5 and 11 have been amended as follows:

wherein the outer circumference portion of said first optical lens and the outer circumference portion of said second optical lens are bonded together with an adhesive to opposite ends of a ring-shaped via an intermediate member.

Support for this amended claim language is found, for example, on pages 18 to 19 of the specification where the intermediate member 7 is described as being bonded to the first and second lenses 30 and 6 by adhesive layers 16 and 17, respectively.

With regard to claims 7 to 9, claim 7 has been amended in a manner similar to claims 1 and 10 to include the following additional limitation:

said second optical lens has a first convex portion on one surface, and a second convex portion on another surface opposing said one surface.

Claims 7 to 9 are therefore believed to be allowable over Yamada et al. for at least the same reasons explained above regarding independent claims 1 and 10.

Accordingly, reconsideration and withdrawal of the rejection of claims 5, 7 to 9 and 11 under 35 U.S.C. 103(a) based on Yamada et al. are respectfully requested.

## Allowable Subject Matter

On pages 4 to 5 of the Office Action, the Examiner stated that claims 13 to 18 are allowed, and claims 6 and 12 would be allowable if rewritten in independent form. Claim 12 was previously rewritten in independent form, and claim 6 has been rewritten in independent form by this Amendment to thereby place claims 6 and 12 to 18 in clear condition for allowance.

Applicants respectfully submit that all of the pending claims 1 to 18 are now in condition for allowance, and request that a timely Notice of Allowance be issued for this application.

If the Examiner has any comments or suggestions that could place this application into even better form, the Examiner is encouraged to contact the Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted by:

Dated: October\_\_\_, 2003

Romald F. Kananen Registration No. 24,104

RADER, FISHMAN & GRAUER, P.L.L.C.

1233 20th Street, N.W.

Suite 501

Washington, D.C. 20036

Telephone: 202-955-3750 Facsimile: 202-955-3751

Customer No. 23353

## UNITED STATES PATENT AND TRADEMARK OFFICE **CERTIFICATE OF CORRECTION**

PATENT NO. : 6,747,811 B2 DATED

: June 8, 2004

INVENTOR(S) : Koichiro Kishima

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 17,

Lines 18 and 35, "Outer" should read -- outer --.

Column 18,

Line 13, "fiat" should read -- flat --.

Signed and Sealed this

First Day of February, 2005

JON W. DUDAS Director of the United States Patent and Trademark Office